

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



Maine Agricultural Experiment Station

BULLETIN No. 85.

OCTOBER, 1902.

FERTILIZER INSPECTION.

This Bulletin contains the analyses of samples collected by the Station of the brands of Fertilizers licensed in 1902.

Requests for the Bulletins should be addressed to the
AGRICULTURAL EXPERIMENT STATION,
Orono, Maine.

MAINE

AGRICULTURAL EXPERIMENT STATION,

ORONO, MAINE.

THE STATION COUNCIL.

PRESIDENT GEORGE E. FELLOWS	<i>President</i>
DIRECTOR CHARLES D. WOODS	<i>Secretary</i>
EDWARD B. WINSLOW, Portland	} <i>Committee of Board of Trustees</i>
VORANUS C. COFFIN, Harrington	
JOHN A. ROBERTS, Norway	
AUGUSTUS W. GILMAN, Foxcroft	<i>Commissioner of Agriculture</i>
EUGENE HARVEY LIBBY, Auburn	<i>State Grange</i>
CHARLES S. POPE, Manchester	<i>State Pomological Society</i>
RUTILLUS ALDEN, Winthrop	<i>State Dairymen's Association</i>
JAMES M. BARTLETT	} <i>Members of the Station Staff</i>
LUCIUS H. MERRILL	
FREMONT L. RUSSELL	
WELTON M. MUNSON	
GILBERT M. GOWELL	
GILMAN A. DREW	

THE STATION STAFF.

THE PRESIDENT OF THE UNIVERSITY.

CHARLES D. WOODS	<i>Director</i>
JAMES M. BARTLETT	<i>Chemist</i>
LUCIUS H. MERRILL	<i>Chemist</i>
FREMONT L. RUSSELL	<i>Veterinarian</i>
WELTON M. MUNSON	<i>Horticulturist</i>
GILBERT M. GOWELL	<i>Stock Breeding and Poultry</i>
GILMAN A. DREW	<i>Zoologist</i>
EDWARD R. MANSFIELD	<i>Assistant Chemist</i>
HERMAN H. HANSON	<i>Assistant Chemist</i>
HORACE W. BRITCHER	<i>Assistant Zoologist</i>
MARSHALL B. CUMMINGS	<i>Assistant in Horticulture</i>

FERTILIZER INSPECTION.

CHAS. D. WOODS, Director.

J. M. BARTLETT, Chemist in charge of Fertilier Analysis.

The law regulating the sale of commercial fertilizers in this State calls for two bulletins each year. The first of these contains the analyses of the samples received from the manufacturer guaranteed to represent, within reasonable limits, the goods to be placed upon the market later. The second bulletin contains the analyses of the samples collected in the open market by a representative of the Station.

The analyses of the manufacturer's samples for this year were published early in March. The present bulletin contains the analyses of the samples collected by the representative of the Director of the Station.

The figures which are given as the percentages of valuable ingredients guaranteed by the manufacturers are the minimum percentages of the guarantee. If, for instance, the guarantee is 2 to 3 per cent of nitrogen, it is evident that the dealer cannot be held to have agreed to furnish more than two per cent and so this percentage is taken as actual guarantee. The figures under the head of "found" are those showing the actual composition of the samples.

A comparison of the results of the analyses of the samples collected by the Station with the percentages guaranteed by the manufacturers shows that, as a rule, the fertilizers sold in the State are well up to the guarantee. In a few instances the particular lots of fertilizers sampled are not quite as good as they should be; there is, however, no case which appears to be an attempt to defraud. The comparisons indicate that the manufacturers do not intend to do much more than make good the minimum guarantee and this is all that the purchaser can safely expect.

DESCRIPTIVE LIST OF STATION SAMPLES, 1902.

Station number.	Manufacturer, place of business and brand.	Sampled at
THE AMERICAN AGR. CHEM. CO., N. Y.		
2813	Bradley's Complete Manure for Potatoes and Vegetables. . .	Bangor
2814	Bradley's Complete Manure with 10% Potash.....	Houlton.....
2815	Bradley's Corn Phosphate	Bangor
2816	Bradley's Eureka Fertilizer	Bangor
2817	Bradley's Niagara Phosphate.....	Portland.....
2818	Bradley's Potato Fertilizer	Bangor
2819	Bradley's Potato Manure.....	Bangor
2820	Bradley's X. L. Superphosphate.....	Bangor
2821	Clark's Cove Bay State Fertilizer.....	Belfast
2822	Clark's Cove Bay State Fertilizer G. G.....	Portland
2823	Clark's Cove Bay State Fertilizer for Seeding Down.....	Portland
2824	Clark's Cove Defiance Complete Manure.....	Portland
2825	Clark's Cove Great Planet Manure A. A.	Portland .. .
2826	Clark's Cove King Philip Alkaline Guano.....	Portland
2827	Clark's Cove Potato Manure.....	Portland
2828	Cleveland Fertilizer for All Crops	Portland . . .
2829	Cleveland High Grade Complete Manure	Bangor
2830	Cleveland Potato Phosphate	Portland
2831	Cleveland Seeding Down Fertilizer.....	Portland . . .
2832	Cleveland Superphosphate	Portland
2833	Crocker's Corn Phosphate	Portland
2834	Crocker's Grass and Oat Fertilizer.....	Portland
2835	Crocker's Rival Ammoniated Superphosphate	No. Carmel.....
2836	Crocker's Potato, Hop and Tobacco Phosphate.....	Portland
2837	Crocker's Special Potato Manure	Presque Isle....
2838	Crocker's Superior Phosphate.....	Bangor
2839	Cumberland Guano for All Crops	Bangor
2840	Cumberland Potato Fertilizer	Ea. Corinth
2841	Cumberland Seeding Down Manure.....	Portland
2842	Cumberland Superphosphate.....	Portland
2843	Darling's Blood, Bone and Potash . . .	Caribou.....
2844	Great Eastern General Fertilizer . . .	Old Town.....
2845	Great Eastern Grass and Oat Fertilizer.....	Old Town.....
2846	Great Eastern High Grade Special Potato Manure.....	Caribou.
2847	Great Eastern Potato Manure.....	Old Town. . . .
2848	Great Eastern Northern Corn Special.....	Carmel
2849	Otis Potato Fertilizer....	So. Windham ..
2850	Otis Superphosphate	So. Windham ..
2851	Pacific Dissolved Bone and Potash ...	Portland
2852	Pacific Grass and Grain Fertilizer	Belfast.....
2853	Pacific High Grade General Fertilizer.....	Belfast.
2854	Pacific Nobsque Guano.....	Portland

ANALYSES OF STATION SAMPLES, 1902.

Station number.	NITROGEN.				PHOSPHORIC ACID.								POTASH.	
	Soluble in water.	Insoluble in water.	Total.		Soluble.	Reverted.	Insoluble.	Available.		Total.		Found.	Guaranteed.	
			Found.	Guaranteed.				Found.	Guaranteed.	Found.	Guaranteed.			
2813	2.27	1.24	3.51	3.30	5.34	3.18	1.80	8.52	6	10.32	9	7.90	7	
2814	1.18	2.12	3.30	3.30	3.03	3.36	2.25	6.39	6	8.64	7	10.07	10	
2815	1.10	1.08	2.18	2.06	5.74	3.19	2.14	8.93	8	11.07	10	1.91	1.50	
2816	.72	.64	1.36	1.03	4.86	4.54	2.16	9.40	7	11.56	10	2.08	2	
2817	.71	.64	1.35	.82	3.08	4.07	2.83	7.15	7	9.98	8	1.23	1	
2818	.74	1.36	2.10	2.06	6.30	2.68	2.41	8.98	8	11.39	10	2.76	3	
2819	1.19	1.36	2.55	2.50	3.92	3.73	3.24	7.65	6	10.89	8	4.88	5	
2820	1.89	.84	2.73	2.50	6.57	3.65	1.42	10.22	9	11.64	11	2.37	2	
2821	.93	1.80	2.73	2.50	3.27	5.41	2.42	8.68	9	11.10	11	2.34	2	
2822	.83	1.46	2.29	2.06	5.90	2.58	3.20	8.48	8	11.68	10	1.68	1.50	
2823	.76	1.00	1.76	1.03	4.07	3.72	2.07	7.79	8	9.86	10	1.54	2	
2824	.47	.68	1.15	.82	3.65	3.83	2.70	7.48	7	10.18	8	1.41	1	
2825	2.06	1.14	3.20	3.30	5.22	3.15	2.28	8.37	8	10.65	9	6.87	7	
2826	.50	.82	1.32	1.03	4.82	3.58	1.70	8.40	8	10.10	10	2.05	2	
2827	.82	2.00	2.82	2.50	4.18	3.29	2.53	7.47	6	10.00	8	5.25	5	
2828	.58	.80	1.38	1.03	4.63	3.35	3.20	7.98	8	11.18	10	2.12	2	
2829	1.70	1.42	3.12	3.30	5.58	3.07	1.65	8.65	8	10.30	9	6.55	7	
2830	.78	1.36	2.14	2.06	5.89	2.90	2.58	8.79	8	11.37	10	3.82	3	
2831	.61	.68	1.29	1.03	4.99	3.26	3.41	8.25	8	11.66	10	2.01	2	
2832	1.52	.68	2.20	2.06	3.40	4.97	3.74	8.37	8	12.11	10	1.81	1.50	
2833	1.38	.76	2.14	2.06	3.51	5.00	3.37	8.51	8	11.88	.....	1.76	1.50
2834	.....	.....	.....	.....	8.33	3.51	1.48	11.84	11	13.32	.....	2.12	2
2835	.62	.66	1.28	1.03	4.63	3.51	3.02	8.14	8	11.16	.....	2.06	2
2836	1.57	.72	2.29	2.06	4.31	4.38	3.07	8.69	8	11.76	.....	3.53	3
2837	2.08	1.22	3.30	3.29	4.48	2.32	1.99	6.80	6	8.79	.....	10.39	10
2838	.23	.86	1.09	.82	4.86	3.35	2.11	8.21	8	10.32	.....	2.09	2
2839	.38	.88	1.26	1.03	4.75	3.39	2.99	8.14	8	11.13	10	2.11	2	
2840	.64	1.56	2.20	2.06	6.83	2.72	2.41	9.55	8	11.96	10	3.24	3	
2841	.78	.98	1.76	1.03	4.55	3.21	2.67	7.76	8	10.43	10	1.80	2	
2842	1.18	.98	2.16	2.06	4.07	4.22	3.70	8.29	8	11.99	10	1.76	1.50	
2843	2.80	1.20	4.00	4.10	5.58	2.44	1.93	8.02	7	9.95	8	7.36	7	
2844	.57	.64	1.21	.82	2.15	4.70	3.18	6.85	8	10.03	.....	4.25	4
2845	.....	.....	.....	.....	8.34	2.96	1.57	11.30	11	12.87	.....	2.17	2
2846	2.10	1.22	3.32	3.29	3.84	3.04	2.58	6.88	6	9.46	....	10.24	10
2847	1.14	.72	1.86	2.06	5.98	1.27	2.88	7.25	8	10.13	.....	3.14	3
2848	.82	1.30	2.18	2.06	6.14	2.68	2.95	8.82	8	11.77	.....	1.73	1.50
2849	1.34	.66	2.00	2.06	4.55	4.50	2.64	9.05	8	11.69	10	3.46	3	
2850	1.12	1.28	2.14	2.06	5.98	2.79	1.85	8.77	8	10.62	10	1.80	1.50	
2851	.....	.....	.....	.....	8.77	3.35	1.20	12.12	10	13.32	12	2.23	2
2852	.50	.84	1.34	.82	4.80	3.14	2.51	7.94	7	10.45	8	1.92	1	
2853	2.02	1.36	3.38	3.30	3.91	3.72	1.62	7.63	8	9.25	9	7.42	7	
2854	.50	.74	1.24	1.03	4.63	3.60	1.98	8.23	8	10.21	10	2.01	2	

DESCRIPTIVE LIST OF AGENTS SAMPLES, 1902.

Station number.	Manufacturer, place of business and brand.	Sampled at
2855	Pacific Potato Special.	Portland
2856	Packer's Union Animal Corn Fertilizer	East Eddington
2857	Packer's Union Economical Vegetable Guano	Etna
2858	Packer's Union Gardiner's Complete Manure	Caribou
2859	Packer's Union Potato Manure	East Eddington
2860	Packer's Union Universal Fertilizer	East Eddington
2861	Packer's Union Wheat, Oats and Clover Fertilizer	East Eddington
2862	Quinnipiac Climax Phosphate for All Crops	Portland
2863	Quinnipiac Corn Manure	Portland
2864	Quinnipiac Mohawk Fertilizer	Portland
2865	Quinnipiac Potato Manure	Portland
2866	Quinnipiac Potato Phosphate	Portland
2867	Quinnipiac Seeding Down Manure	Portland
2868	Read's Potato Manure	Caribou
2869	Read's Practical Potato Special	Portland
2870	Read's Standard Superphosphate	Portland
2871	Read's Sure Catch Fertilizer	Portland
2872	Read's Vegetable and Vine Fertilizer	Belfast
2873	Soluble Pacific Guano	Portland
2874	Standard A. Brand	Portland
2875	Standard Bone and Potash	Belfast
2876	Standard Complete Manure	Caribou
2877	Standard Fertilizer	Portland
2878	Standard Guano for All Crops	Portland
2879	Standard Special for Potatoes	Portland
2880	Williams and Clark's Americus Amm. Bone Superphosphate	Portland
2881	Williams and Clark's Americus Corn Phosphate	East Corinth
2882	Williams and Clark's Americus High Grade Special	Portland
2883	Williams and Clark's Americus Potato Manure	East Corinth
2884	Williams and Clark's Royal Bone Phosphate for All Crops	East Corinth
	THE BOWKER FERTILIZER CO., BOSTON, MASS.	
2885	Bowker's Corn Phosphate	Damascus
2886	Bowker's Early Potato Manure	Hermon
2887	Bowker's Farm and Garden Phosphate	Etna
2888	Bowker's Hill and Drill Phosphate	Damascus
2889	Bowker's Potash Bone	Bangor
2890	Bowker's Potash or Staple Phosphate	Hermon
2891	Bowker's Potato and Vegetable Fertilizer	Hermon
2892	Bowker's Potato and Vegetable Phosphate	Damascus
2893	Bowker's Six Per Cent Fertilizer	Bangor
2894	Bowker's Square Brand Bone and Potash	Houlton
2895	Bowker's Sure Crop Phosphate	Bangor
2896	Bowker's Ten Per Cent Manure	Bangor

ANALYSES OF STATION SAMPLES, 1902.

Station number.	NITROGEN.				PROSPHORIC ACID.								POTASH.	
	Soluble in water.	Insoluble in water.	Total.		Soluble.	Reverted.	Insoluble.	Available.		Total.		Found.	Guaranteed.	
			Found.	Guaran- teed.				Found.	Guaran- teed.	Found.	Guaran- teed.			
2855	.98	1.22	2.20	2.06	4.63	3.36	3.33	7.99	8	11.32	10	3.55	3	
2856	.92	1.74	2.72	2.47	6.78	2.72	2.45	9.50	9	11.95	.....	2.20	2
2857	.65	.78	1.43	1.25	4.94	3.04	2.05	7.98	6	10.03	.....	3.35	3
2858	1.84	.84	2.68	2.47	3.14	3.58	2.00	6.72	6	8.72	.....	10.58	10
2859	.80	1.50	2.30	2.06	6.03	2.82	2.92	8.85	8	11.77	.....	6.20	6
2860	.46	.70	1.16	.82	6.54	2.36	2.50	8.90	8	11.40	.....	4.01	4
2861	.....	.....	.....	.. ..	6.06	4.16	1.66	10.22	11	11.88	.....	2.24	2
2862	.48	.78	1.26	1.03	5.06	3.10	2.83	8.16	8	10.99	10	2.28	2	
2863	1.38	.76	2.14	2.06	3.35	5.23	3.78	8.58	8	12.36	10	1.81	1.50	
2864	.53	.80	1.33	.82	3.72	3.46	2.79	7.18	7	9.97	8	1.26	1	
2865	1.35	1.12	2.47	2.50	2.86	3.76	3.62	6.62	6	10.24	8	5.21	5	
2866	1.08	1.14	2.22	2.06	6.01	3.90	1.67	9.91	8	11.58	10	2.91	3	
2867	.26	.88	1.14	1.03	5.18	3.79	1.35	8.97	8	10.32	10	1.90	2	
2868	1.33	1.16	2.49	2.40	4.07	2.78	4.76	6.85	6	11.61	7	9.57	10	
2869	.28	.96	1.24	.82	2.39	2.64	2.42	5.03	4	7.45	5	9.33	8	
2870	.30	.76	1.06	.82	5.92	3.07	2.46	8.99	8	11.45	10	4.20	4	
2871	.....	.....	.....	.....	5.53	5.52	1.82	11.05	10	12.87	12	2.31	2
2872	.24	2.08	2.32	2.06	5.92	3.27	3.01	9.19	8	12.20	10	6.27	6	
2873	1.31	.96	2.27	2.06	4.55	3.85	3.74	8.40	8	12.14	10	1.87	1.50	
2874	.58	.68	1.26	.82	3.40	3.64	2.93	7.04	7	9.97	8	2.09	1	
2875	.....	.....	.....	.....	4.48	5.96	1.86	10.44	10	12.30	12	2.81	2
2876	1.66	1.76	3.42	3.30	4.27	2.76	1.82	7.03	8	8.85	9	7.31	7	
2877	1.58	.66	2.24	2.06	3.54	4.94	3.67	8.48	8	12.15	10	1.93	1.50	
2878	.60	.80	1.40	1.03	4.98	3.40	3.02	8.38	8	11.40	10	2.26	2	
2879	.94	1.34	2.28	2.06	6.46	2.80	2.30	9.26	8	11.56	10	3.02	3	
2880	1.30	1.34	2.64	2.50	6.27	3.62	2.77	9.89	9	12.66	11	2.10	2	
2881	.98	1.46	2.44	2.06	5.34	3.03	3.51	8.37	8	.....	10	2.03	1.50
2882	1.80	1.40	3.20	3.30	5.58	3.22	1.77	8.80	8	10.57	9	7.31	7	
2883	1.13	1.42	2.55	2.06	6.05	3.07	1.68	9.12	8	10.80	10	3.45	3	
2884	.48	.74	1.22	1.03	5.02	3.06	3.20	8.08	8	11.28	10	2.17	2	
2885	1.48	.45	1.93	1.50	5.47	3.06	2.62	8.53	8	11.15	10	2.29	2	
2886	2.72	.56	3.28	3.00	5.92	2.78	1.24	8.70	7	9.94	9	7.38	7	
2887	1.34	.46	1.80	1.50	5.06	4.90	1.94	9.96	8	11.90	10	2.24	2	
2888	1.94	.62	2.56	2.25	6.06	3.38	3.80	9.44	9	13.24	11	2.44	2	
2889	.64	.19	.83	.75	2.01	4.28	2.72	6.29	6	9.01	8	2.09	2	
2890	.68	.15	.83	.75	3.99	4.13	2.45	8.12	8	10.57	10	3.13	3	
2891	1.80	.48	2.28	2.25	3.86	4.68	2.32	8.54	9	10.86	10	4.17	4	
2892	1.28	.46	1.74	1.50	4.78	3.49	2.88	8.27	9	11.15	11	2.30	2	
2893	.65	.18	.83	.75	1.53	4.29	2.31	5.82	6	8.13	9	6.44	6	
2894	.89	.66	1.55	1.50	1.75	4.67	6.47	6.42	6	12.89	12	2.16	2	
2895	.71	.20	.91	.75	4.43	3.92	1.76	8.35	9	10.11	11	2.21	2	
2896	.61	.37	.98	.75	1.88	3.82	2.13	5.70	5	7.83	7	9.73	10	

DESCRIPTIVE LIST OF STATION SAMPLES, 1902.

Station number.	Manufacturer, place of business and brand.	Sampled at
2897	Gloucester Fish and Potash.....	Bangor.....
2898	Maine State Grange Chemicals.....	Houlton.....
2899	Maine State Grange Potato Manure.....	Houlton.....
2900	Stockbridge Corn and Grain Manure.....	Damascus.....
2901	Stockbridge Potato Manure.....	Hermon.....
2902	Stockbridge Seeding Down Manure..... E. FRANK COE CO., NEW YORK, N. Y.	Bangor.....
2903	E. Frank Coe's Celebrated Special Potato Fertilizer.....	Winterport.....
2904	E. Frank Coe's Columbian Bone Superphosphate.....	Bangor.....
2905	E. Frank Coe's Columbian Corn Fertilizer.....	Newport.....
2906	E. Frank Coe's Columbian Potato Fertilizer.....	Winterport.....
2907	E. Frank Coe's Excelsior Potato Fertilizer.....	Belfast.....
2908	E. Frank Coe's Grass and Grain Special.....	Bangor.....
2909	E. Frank Coe's High Grade Ammoniated Bone Superphos.....	Winterport.....
2910	E. Frank Coe's High Grade Potato Fertilizer.....	Winterport.....
2911	E. Frank Coe's New Englander Corn Fertilizer.....	Etna.....
2912	E. Frank Coe's New Englander Potato Fertilizer.....	Etna.....
2913	E. Frank Coe's Prize Brand Grain and Grass Fertilizer.....	Belfast.....
2914	E. Frank Coe's Red Brand Excelsior Guano..... DEERING PACKING CO., SACO, ME.	Etna.....
2915	Perfection Fertilizer..... FERNALD KEEN & TRUE CO., WEST POLAND, ME.	Biddeford.....
2916	Sweet Corn Manure..... WALTER G. FOSS, FOXCROFT, ME.	Oxford.....
2917	New Market Fertilizer.....	Foxcroft.....
2918	New Market Fertilizer..... LISTER'S AGRICUL. CHEM. WORKS, NEWARK, N. J.	Foxcroft.....
2919	Lister's Animal Bone and Potash.....	Portland.....
2920	Lister's High Grade Special for Spring Crops.....	Portland.....
2921	Lister's Potato Manure.....	Portland.....
2922	Lister's Seeding Down Fertilizer.....	Portland.....
2923	Lister's Special Corn and Potato Fertilizer.....	Carmel.....
2924	Lister's Success Fertilizer..... LOWELL FERTILIZER CO., BOSTON, MASS.	Carmel.....
2925	Swift's Lowell Animal Brand.....	East Corinth.....
2926	Swift's Lowell Bone Fertilizer.....	Yarmouth.....
2927	Swift's Lowell Dissolved Bone and Potash.....	Belfast.....
2928	Swift's Lowell Ground Bone.....	Yarmouth.....
2929	Swift's Lowell Potato Manure.....	Brewer.....
2930	Swift's Lowell Potato Phosphate..... NATIONAL FERTILIZER CO., BRIDGEPORT, CONN.	Bangor.....
2931	Chittenden's Ammoniated Bone Phosphate.....	Presque Isle.....
2932	Chittenden's Complete Fertilizer.....	Ft. Fairfield.....
2933	Chittenden's Market Garden..... NEW ENGLAND FERTILIZER CO., BOSTON, MASS.	Ft. Fairfield.....
2934	New England Corn Phosphate.....	Bangor.....
2935	New England Potato Fertilizer.....	Etna.....
2936	New England Seeding Fertilizer..... EDWIN J. PHILBRICK, AUGUSTA, ME.	Bangor.....
2937	Philbrick's Fertilizer.....	Augusta.....

ANALYSES OF STATION SAMPLES, 1902.

Station number.	NITROGEN.				PHOSPHORIC ACID.								POTASH.	
	Soluble in water.	Insoluble in water.	Total.		Soluble.	Reverted.	Insoluble.	Available.		Total.		Found.	Guaranteed.	
			Found.	Guaranteed.				Found.	Guaranteed.	Found.	Guaranteed.			
2897	.69	.30	.99	.75	1.63	6.15	4.20	7.78	6	11.98	9	1.30	1	
2898	1.92	.62	2.54	2.50	6.24	2.43	3.05	8.67	8	11.72	12	5.08	4	
2899	1.44	.34	1.78	1.50	4.90	3.85	3.28	8.75	9	12.03	12	11.53	12	
2900	2.55	.74	3.29	3.00	5.25	2.34	2.14	7.59	7	9.73	9	7.68	7	
2901	2.15	.83	2.98	3.00	4.02	2.85	2.32	6.87	6	9.19	8	10.23	10	
2902	1.99	.76	2.75	2.25	2.46	3.63	2.87	6.09	6	8.96	10	9.53	10	
2903	1.40	.31	1.71	1.65	5.45	3.13	1.96	8.58	8	10.54	9.50	4.25	4	
2904	.64	.63	1.27	1.20	6.84	2.78	2.68	9.62	8.50	12.30	10	2.44	2.50	
2905	.71	.60	1.31	1.20	6.83	2.90	2.46	9.73	8.50	12.19	10	2.34	2.50	
2906	1.03	.57	1.60	1.20	6.70	2.84	2.45	9.54	8.50	11.99	10	2.69	2.50	
2907	1.97	.48	2.45	2.40	7.19	1.88	2.02	9.07	7	11.09	8.50	6.52	8	
2908	.28	.67	.95	.80	6.46	2.75	2.55	9.21	8.50	11.76	10	1.63	1.50	
2909	1.52	.66	2.18	1.85	6.84	2.92	2.07	9.76	9	11.83	13	2.71	2.25	
2910	1.25	1.30	2.55	2.40	6.32	2.05	2.17	8.37	7.50	10.54	8.50	5.66	6	
2911	.53	.73	1.26	.80	5.63	2.93	2.41	8.56	7.50	10.97	9	2.80	3	
2912	.34	.66	1.00	.80	5.97	2.49	2.50	8.46	7.50	10.96	9	3.01	3	
2913	.....	.....	.....	.....	5.93	4.26	3.48	10.19	10.50	13.67	12	1.83	2
2914	2.04	1.10	3.14	3.40	7.56	2.09	2.04	9.65	9	11.69	10.50	5.31	6	
2915	.....	.71	.71	.40	4.74	3.33	.69	8.07	6	8.76	8	3.43	2
2916	1.36	1.16	2.52	2.50	5.93	3.23	1.91	9.16	9	11.07	11	2.79	2	
2917	.62	.31	.93	.40	6.79	4.13	.85	10.92	6	11.77	8	4.50	2	
2918	.51	.52	1.03	.40	3.70	3.66	.87	7.36	6	8.23	8	3.05	2	
2919	.....	.....	.....	.....	6.19	4.99	1.47	11.18	10	12.65	11	2.49	2
2920	1.21	.60	1.81	1.65	6.76	2.36	1.21	9.12	8	10.33	9	10.40	10	
2921	2.63	.67	3.30	3.30	5.01	3.39	2.08	8.40	8	10.48	9	7.03	7	
2922	.59	.52	1.11	.83	5.69	3.01	1.79	8.70	7	10.49	8	1.69	1	
2923	1.49	.48	1.97	1.65	5.15	3.27	2.64	8.52	8	11.16	9	3.15	3	
2924	.94	.42	1.36	1.24	7.07	1.81	2.48	8.88	9	11.36	11	2.24	2	
2925	1.50	1.13	2.63	2.47	7.42	2.40	1.31	9.82	9	11.13	10	4.43	4	
2926	1.31	.68	1.99	1.65	4.64	3.14	1.34	7.78	8	9.12	9	4.03	3	
2927	1.09	.61	1.70	1.65	6.43	1.71	2.07	8.14	9	10.21	10	2.47	2	
2928	1.68	1.16	2.84	2.47	.....	.....	.....	.....	.....	24.69	25	.....	.....
2929	.99	.95	1.94	1.65	4.83	3.00	1.61	7.83	7	9.44	8	4.26	4	
2930	1.88	.79	2.67	2.47	6.16	2.26	1.63	8.42	8	10.05	9	6.62	6	
2931	.77	.95	1.72	1.60	5.15	4.30	1.67	9.45	8	11.12	10	2.68	2	
2932	2.20	1.22	3.42	3.30	6.06	2.16	1.51	8.22	8	9.73	10	7.31	6	
2933	1.17	1.35	2.52	2.47	4.59	2.13	1.59	6.72	6	8.31	8	5.79	5	
2934	1.70	.55	2.25	1.65	3.03	6.38	1.00	9.41	8	10.41	9	3.16	3	
2935	1.64	.60	2.24	1.64	5.18	2.58	1.49	7.76	7	9.25	8	3.86	4	
2936	1.02	.39	1.41	1.22	4.93	2.68	.76	7.61	7	8.37	8	2.07	2	
2937	2.36	.77	3.13	2.00	3.33	4.63	3.62	7.96	7	11.58	9	5.29	5	

DESCRIPTIVE LIST OF STATION SAMPLES, 1902.

Station number.	Manufacturer, place of business and brand.	Sampled at
	PARMENTER & POLSEY FERT. CO., PEABODY, MASS.	
2938	A. A. Brand Fertilizer.	Presque Isle....
2939	P. & P. Potato Fertilizer	Presque Isle....
2940	Plymouth Rock Brand Fertilizer.....	Presque Isle....
2941	Special Potato Fertilizer	Presque Isle....
	PORTLAND RENDERING CO., PORTLAND, ME.	
2942	Bone Tankage.....	Ea. Deering....
	PROVINCIAL CHEMICAL FERT. CO. Lt'd, St. John, N.B.	
2943	Potato Phosphate.....	Presque Isle....
	RUSSIA CEMENT CO., GLOUCESTER, MASS.	
2944	Essex A 1 Superphosphate.....	Bangor
2945	Essex Complete Manure for Potatoes, Roots and Vegetables.	Bangor
2946	Essex Corn Fertilizer.....	Bangor
2947	Essex Market Garden and Potato Manure	Bangor
2948	Essex XXX Fish and Potash.....	Bangor
	SAGADAHOC FERTILIZER CO., BOWDOINHAM, ME.	
2949	Aroostook Potato Manure ...	Old Town
2950	Clark's Mixture.....	Bowdoinham ..
2951	Dirigo Fertilizer.....	Bangor
2952	Sagadahoc High Grade Superphosphate.	Old Town
2953	Sagadahoc Special Clover Fertilizer	Bowdoinham ..
2954	Special Potato Fertilizer....	Old Town
2955	Yankee Fertilizer.....	Old Town
	JOHN WATSON, HOULTON, ME.	
2956	Watson's Improved High Grade Potato Manure.....	Houlton

ANALYSES OF STATION SAMPLES, 1901.

Station number.	NITROGEN.				PHOSPHORIC ACID.								POTASH.	
	Soluble in water.	Insoluble in water.	Total.		Soluble.	Reverted.	Insoluble.	Available.		Total.		Found.	Guaranteed.	
			Found.	Guaran- teed.				Found.	Guaran- teed.	Found.	Guaran- teed.			
2938	4.16	.51	4.67	4.53	3.96	4.09	2.40	8.05	7	10.45	8	8.53	8	
2939	1.49	.52	2.01	1.64	2.04	4.21	3.75	6.25	6	10.00	7	6.47	6	
2940	2.04	.52	2.56	2.47	3.91	4.08	3.83	7.99	8	11.82	9	4.46	4	
2941	2.42	.75	3.17	3.29	4.04	4.34	3.36	8.38	8	11.74	9	7.33	7	
2942	3.09	2.37	5.46	6	....	.. ..	6.53	9.36	.....	15.89	14	.....	.....
2943	1.86	.70	2.56	3	7.62	2.63	5.75	10.25	8	16.00	14	3.47	6.50	
2944	.53	.56	1.09	1	.85	4.19	5.97	5.04	7	11.01	9	2.54	2	
2945	3.10	.50	3.60	3.70	3.86	3.01	5.09	6.87	7	11.96	9	8.72	8.50	
2946	1.88	.52	2.40	2	2.47	4.63	5.61	7.10	8.50	12.71	10.50	3.55	3	
2947	1.27	1.19	2.46	2	2.57	5.49	3.97	8.06	8	12.03	10	5.44	5	
2948	1.18	1.09	2.27	2.10	4.21	3.08	6.25	7.29	9	13.54	12	2.56	2.25	
2949	.99	.58	1.57	1.50	3.19	3.06	1.90	6.25	7	8.15	8	5.37	3	
2950	6.46	.82	7.28	7.50	.....	. ...	2.18	6.75	2	8.93	8	8.63	8
2951	.58	.70	1.28	1.50	3.52	4.20	5.65	7.72	5	13.37	12	4.64	1.75	
2952	1.46	.78	2.24	2	4.37	3.96	1.75	8.33	7	10.08	8	4.63	3	
2953	.51	.84	1.35	1.25	4.71	5.36	2.45	10.07	6	12.52	9	1	.....
2954	1.17	.89	2.06	2.25	3.38	3.13	.83	6.51	8	7.34	9	11.06	7.50	
2955	1.20	.38	1.58	.40	2.58	2.03	2.97	4.61	6	7.58	8	4.34	2	
2956	1.29	1.74	3.03	3	2.47	3.36	5.49	5.83	6	11.32	7	5.31	5	

COMPARISON OF GUARANTEES AND STATION SAMPLES FOR THREE YEARS.

Name of Fertilizer.	NITROGEN.			AVAILABLE PHOSPHORIC ACID.			POTASH.		
	Found.			Found.			Found.		
	1900.	1901.	1902.	1900.	1901.	1902.	1900.	1901.	1902.
	%	%	%	%	%	%	%	%	%
	Guaranteed	Guaranteed	Guaranteed	Guaranteed	Guaranteed	Guaranteed	Guaranteed	Guaranteed	Guaranteed
	In 1902.	In 1902.	In 1902.	In 1902.	In 1902.	In 1902.	In 1902.	In 1902.	In 1902.
Bradley's Complete Manure for Potatoes and Vegetables.	3.06	3.55	3.51	3.30	8.70	8.78	7.41	7.48	7.90
Bradley's Complete Manure with 10% Potash.	2.19	2.29	3.30	3.30	8.31	7.14	.....	9.60	10.07
Bradley's Corn Phosphate	2.19	2.48	2.18	2.06	9.41	8.31	1.96	1.88	1.91
Bradley's Eureka Fertilizer.	1.20	1.91	1.36	1.03	8.18	6.42	2.25	2.57	2.08
Bradley's Niagara Phosphate.	1.15	1.85	1.35	.82	8.31	8.14	1.35	1.85	1.23
Bradley's Potato Fertilizer	2.10	2.07	2.10	2.06	8.90	8.17	3.18	3.46	2.76
Bradley's Potato Manure	2.51	2.81	2.55	2.50	6.48	6.78	5.58	5.30	4.88
Bradley's X. L. Superphosphate.	2.51	2.51	2.73	2.50	9.72	9.72	2.32	2.28	2.37
Clark's Cove Bay State Fertilizer	2.50	2.51	2.73	2.50	9.10	10.19	2.30	2.87	2.34
Clark's Cove Bay State Fertilizer, G. G.	2.17	2.34	2.29	2.06	9.65	8.68	2.08	1.86	1.65
Clark's Cove Bay State Fertilizer for Seeding Down.	1.13	1.28	1.76	1.03	9.10	11.18	2.47	1.62	1.54
Clark's Cove Defiance Complete Manure	1.29	.....	1.15	.82	9.08	7.48	1.80	.....	1.41
Clark's Cove Great Planet Manure, A. A. ....	.....	3.02	3.20	3.30	.....	8.69	.....	7.29	6.87
Clark's Cove King Philip Alkaline Guano	1.20	1.35	1.32	1.03	8.49	8.25	2.16	2.56	2.05
Clark's Cove Potato Manure .....	.....	.....	2.82	2.50	.....	.....	.....	.....	5.25
Cleveland Fertilizer for All Crops	1.15	.....	1.38	1.03	9.37	.....	2.29	.....	2.12
Cleveland High Grade Complete Manure. ....	.....	3.32	3.12	3.30	.....	9.29	.....	7.18	6.55
Cleveland Potato Phosphate.	2.24	2.03	2.14	2.06	8.52	9.03	3.29	3.08	3.82
Cleveland Seeding Down Fertilizer.	1.23	1.30	1.29	1.03	8.65	8.92	2.39	2.00	2.01
Cleveland Superphosphate.	2.07	2.16	2.20	2.06	8.68	9.02	1.87	1.73	1.5
Crocker's Corn Phosphate	2.15	2.06	2.14	2.06	9.05	8.13	2.00	1.94	1.76

FERTILIZER INSPECTION.

163

Crocker's Grass and Oats Fertilizer.....	.....	.....	.....	.....	.....	10.29	11.13	11.84	†11.01	2.11	2.18	2.12	2.0
Crocker's New Rival Ammoniated Superphosphate.....	.....	.....	.....	.....	.....	9.64	8.18	8.14	†8.0	2.06	2.79	2.05	†2.0
Crocker's Potato, Hop and Tobacco Fertilizer...	.....	.....	.....	.....	.....	*9.01	8.02	8.69	†8.0	*3.34	3.08	3.53	†3.0
Crocker's Special Potato Manure .....	.....	.....	.....	.....	.....	3.29	.....	6.80	6.0	.....	.....	10.39	10.0
Crocker's Superior Phosphate .....	.....	.....	.....	.....	.....	.82	.....	8.21	8.0	1.82	.....	2.09	2.0
Cumberland Guano .....	.....	.....	.....	.....	.....	1.03	.....	8.14	8.0	.....	.....	2.11	2.0
Cumberland Potato Fertilizer .....	.....	.....	.....	.....	.....	2.06	.....	9.55	†8.0	*3.16	2.82	3.24	3.0
Cumberland Seeding Down Manure.....	.....	.....	.....	.....	.....	1.03	8.84	7.76	8.0	2.27	2.34	1.80	2.0
Cumberland Superphosphate.....	.....	.....	.....	.....	.....	2.06	9.05	8.79	8.0	2.32	1.98	1.76	†1.5
Darling's Blood, Bone and Potash .....	.....	.....	.....	.....	.....	4.00	8.17	8.15	8.02	7.24	7.96	7.36	†7.0
Great Eastern General Fertilizer.....	.....	.....	.....	.....	.....	.82	8.91	8.90	8.0	3.71	4.14	4.25	4.0
Great Eastern Grass and Oats Fertilizer.....	.....	.....	.....	.....	.....	.....	10.17	11.05	11.30	1.97	2.03	2.17	2.0
Great Eastern High Grade Special Potato Manure .....	.....	.....	.....	.....	.....	3.29	6.98	6.71	6.8	9.58	10.04	10.24	10.0
Great Eastern Potato Manure .....	.....	.....	.....	.....	.....	†2.06	*8.85	8.74	8.0	*3.26	3.51	3.14	†3.0
Great Eastern Northern Corn Special .....	.....	.....	.....	.....	.....	2.06	9.04	9.45	8.0	1.51	2.18	1.73	†1.5
Otis Potato Fertilizer.....	.....	.....	.....	.....	.....	2.00	8.54	9.08	†8.0	3.16	3.45	3.46	3.0
Otis Superphosphate .....	.....	.....	.....	.....	.....	2.12	2.09	8.76	†8.0	1.75	2.03	1.80	†1.5
Pacific Dissolved Bone and Potash .....	.....	.....	.....	.....	.....	.....	.....	12.11	10.0	.....	.....	2.23	2.0
Pacific Grass and Grain Fertilizer.....	.....	.....	.....	.....	.....	1.34	8.49	7.94	7.0	1.36	1.93	1.92	†1.0
Pacific High Grade General Fertilizer.....	.....	.....	.....	.....	.....	3.38	3.30	9.09	8.0	.....	7.19	7.42	7.0
Pacific Nobsque Guano .....	.....	.....	.....	.....	.....	1.24	*1.03	8.43	8.0	2.22	2.55	2.01	2.0
Pacific Potato Special .....	.....	.....	.....	.....	.....	2.00	2.06	9.00	8.0	2.97	3.04	3.55	3.0
Packer's Union Animal Corn Fertilizer .....	.....	.....	.....	.....	.....	2.17	2.20	9.22	8.0	2.97	3.04	3.55	3.0
Packer's Union Economical Vegetable Guano.....	.....	.....	.....	.....	.....	2.62	2.72	8.94	†9.0	2.36	2.37	2.20	2.0
Packer's Union Gardeners' Complete Manure.....	.....	.....	.....	.....	.....	1.21	1.80	6.56	6.0	3.25	3.27	3.35	3.0
Packer's Union Potato Manure.....	.....	.....	.....	.....	.....	2.31	2.68	6.60	6.0	.....	10.87	10.58	10.0
Packer's Union Universal Fertilizer.....	.....	.....	.....	.....	.....	2.30	2.08	8.08	8.0	6.13	7.95	6.20	6.0
Packer's Union Wheat, Oats and Clover Fertilizer...	.....	.....	.....	.....	.....	*1.20	1.32	8.18	8.0	*3.82	4.17	4.01	†4.0
Quinnipiac Climax Phosphate .....	.....	.....	.....	.....	.....	.....	.....	10.80	10.49	2.14	1.99	2.24	2.0
Quinnipiac Corn Manure.....	.....	.....	.....	.....	.....	1.26	1.03	8.16	8.0	2.58	2.28	2.0	.....
Quinnipiac Molhawk Fertilizer.....	.....	.....	.....	.....	.....	2.12	2.44	7.84	†8.0	1.75	1.90	1.87	1.5
Quinnipiac Potato Manure.....	.....	.....	.....	.....	.....	1.33	.....	7.52	7.0	.....	1.37	1.26	1.0
Quinnipiac Potato Phosphate .....	.....	.....	.....	.....	.....	2.49	2.51	5.72	6.0	5.50	5.79	5.21	5.0
Quinnipiac Potato Phosphate .....	.....	.....	.....	.....	.....	2.18	2.30	8.18	8.0	3.20	3.48	2.91	3.0

† Guarantee changed in 1901.

* Average of two analyses.

COMPARISON OF GUARANTEES AND STATION SAMPLES FOR THREE YEARS—Continued.

Name of Fertilizer.	NITROGEN.					AVAILABLE PHOSPHORIC ACID.					POTASH.				
	Found.			Guaranteed		Found.			Guaranteed		Found.			Guaranteed	
	1900.	1901.	1902.	1900.	1901.	1900.	1901.	1902.	1900.	1901.	1900.	1901.	1902.	1900.	1901.
Quinnipiac Seeding Down Manure.....	1.26	1.49	1.14	1.03	.....	7.97	9.11	8.97	78.0	.....	1.97	2.51	1.90	2.0	2.0
Read's Potato Manure.....	2.36	2.23	2.49	2.40	.....	7.35	6.60	6.85	76.0	.....	10.60	10.59	9.57	10.0	10.0
Read's Practical Potato Special	1.08	1.32	1.34	.82	.....	6.11	4.66	5.03	4.0	.....	8.29	9.22	9.33	8.0	8.0
Read's Standard Fertilizer	1.09	.....	1.06	.82	.....	8.58	.....	8.99	8.0	.....	4.23	.....	4.20	4.0	4.0
Read's Sure Catch.....	.....	.....	.....	.....	.....	6.61	.....	11.05	10.0	.....	4.18	.....	2.31	2.0	2.0
Read's Vegetable and Vine Fertilizer.....	2.08	2.15	2.32	2.06	.....	8.61	7.99	9.19	78.0	.....	5.85	6.92	6.27	6.0	6.0
Soluble Pacific Guano .....	.....	2.27	2.06	.....	.....	.....	.....	8.40	8.0	.....	.....	.....	1.87	1.5	1.5
Standard A Brand.....	1.28	1.03	1.26	.82	.....	7.97	7.56	7.04	7.0	.....	1.58	1.46	2.09	1.0	1.0
Standard Bone and Potash .....	.....	.....	.....	.....	.....	.....	.....	10.44	10.0	.....	.....	.....	2.81	2.0	2.0
Standard Complete Manure.....	3.34	.....	3.42	3.30	.....	8.30	.....	7.03	8.0	.....	7.15	.....	7.31	7.0	7.0
Standard Fertilizer	2.32	2.27	2.24	2.06	.....	8.88	8.07	8.48	8.0	.....	2.69	1.85	1.93	1.5	1.5
Standard Guano	1.23	1.47	1.40	1.03	.....	8.41	9.50	8.38	78.0	.....	2.33	2.51	2.36	2.0	2.0
Standard Special for Potatoes.....	2.20	.....	2.28	2.06	.....	9.48	.....	9.26	8.0	.....	3.14	.....	3.02	3.0	3.0
Williams & Clark's American Ammoniated Bone Superphosphate.....	2.58	2.42	2.64	2.50	.....	9.67	9.76	9.89	9.0	.....	2.49	2.52	2.10	2.0	2.0
Williams & Clark's American Corn Phosphate.....	2.20	2.40	2.44	2.06	.....	9.44	9.35	8.37	78.0	.....	1.94	1.95	2.03	1.5	1.5
Williams & Clark's American High Grade Special.....	.....	.....	3.20	3.30	.....	.....	.....	8.80	8.0	.....	.....	.....	7.31	7.0	7.0
Williams & Clark's American Potato Manure.....	2.10	*2.17	2.55	2.06	.....	8.78	*8.54	9.12	.....	.....	3.42	*3.29	3.45	3.0	3.0
Williams & Clark's Royal Bone Phosphate.....	1.10	1.42	1.22	1.03	.....	9.42	10.48	8.08	78.0	.....	2.63	2.16	2.17	2.0	2.0
Bowker's Corn Phosphate.....	1.63	1.56	1.93	1.50	.....	8.32	9.37	8.53	78.0	.....	2.49	2.31	2.29	2.0	2.0
Bowker's Early Potato Manure.....	3.19	*2.80	3.28	3.0	.....	7.80	*7.79	8.70	7.0	.....	7.58	*7.36	7.38	7.0	7.0
Bowker's Farm and Garden Phosphate.....	1.66	1.47	1.80	1.50	.....	9.74	8.71	9.96	78.0	.....	2.26	2.54	2.24	2.0	2.0

FERTILIZER INSPECTION.

165

Bowker's Hill and Drill Phosphate	2.26	2.19	2.56	2.25	8.90	9.41	9.44	9.01	2.30	2.23	2.44	2.0
Bowker's Potash Bone .....	.81	.99	.83	.75	7.72	9.65	6.29	6.01	2.57	1.22	2.09	2.0
Bowker's Potash or Staple Phosphate .....	.84	.88	.83	.75	8.82	7.94	8.12	8.0	3.28	5.38	3.13	3.0
Bowker's Potato and Vegetable Fertilizer	2.51	2.10	2.28	2.25	9.62	10.17	8.54	19.0	4.58	4.60	4.17	4.0
Bowker's Potato and Vegetable Phosphate	1.66	1.53	1.74	1.50	10.48	8.98	8.27	19.0	2.34	2.06	2.06	2.0
Bowker's 6% Potato Fertilizer .....	.92	.90	.83	.75	9.06	8.31	5.82	16.0	6.18	6.59	6.44	6.0
Bowker's Square Brand Bone and Potash	1.85	1.53	1.55	1.50	6.65	6.75	6.42	6.0	2.51	2.28	2.16	2.0
Bowker's Sure Crop Phosphate .....	.96	.90	.91	.75	6.69	8.90	8.35	19.0	2.05	1.96	2.21	12.0
Bowker's 10% Manure .....	.82	.75	.98	.75	6.98	7.55	5.70	15.0	10.44	9.67	9.73	10.0
Gloucester Fish and Potash .....	.84	.83	.99	.75	10.29	6.20	7.78	6.0	1.35	2.20	1.30	1.0
Maine State Granage Chemicals	2.84	2.55	2.54	2.50	9.35	9.31	8.67	8.0	5.44	4.45	5.08	4.0
Maine State Granage Potato Manure	1.68	1.68	1.78	1.59	10.96	10.08	8.75	9.0	11.16	12.63	11.53	12.0
Stockbridge Corn and Grain Manure	3.02	2.83	3.29	3.00	9.89	7.82	7.59	17.0	7.07	7.1	7.68	17.0
Stockbridge Potato and Vegetable Manure	*3.09	2.87	2.98	13.00	*7.51	7.40	6.87	6.0	*10.08	10.50	16.23	10.0
Stockbridge Seeding Down Manure	2.05	2.27	2.75	2.25	8.41	7.72	6.09	6.0	10.22	10.04	9.53	10.0
E. Frank Coe's Celebrated Special Potato Fertilizer .....	.....	1.82	1.71	1.65	.....	8.77	8.58	8.0	.....	4.07	4.25	4.0
E. Frank Coe's Columbian Bone Superphosphate .....	.....	.....	1.27	1.20	.....	.....	9.62	8.5	.....	.....	2.44	2.5
E. Frank Coe's Columbian Corn Fertilizer	1.19	1.42	1.31	1.20	9.06	9.92	9.73	8.5	2.55	2.39	2.34	2.5
E. Frank Coe's Columbian Potato Fertilizer	1.42	1.26	1.60	1.20	9.24	8.76	9.54	8.5	2.81	2.43	2.19	2.5
E. Frank Coe's Excelsior Potato Fertilizer	*2.81	2.46	2.45	12.40	*7.72	8.12	9.07	17.0	*7.57	8.61	6.32	8.0
E. Frank Coe's Famous Grass and Grain Special	1.08	1.02	.95	.80	9.96	8.59	9.21	8.5	2.08	1.87	1.0	11.5
E. Frank Coe's High Grade Ammoniated Bone Superphosphate	1.97	1.71	2.18	1.85	8.68	9.49	9.76	9.0	2.72	2.51	2.71	2.25
E. Frank Coe's High Grade Potato Fertilizer	2.46	2.31	2.55	2.40	7.99	8.37	8.37	17.5	6.70	6.07	5.6	16.0
E. Frank Coe's New Englander Corn Fertilizer .....	.96	1.20	1.26	.80	8.44	8.44	8.56	7.5	3.18	3.20	2.80	3.0
E. Frank Coe's New Englander Potato Fertilizer	1.03	1.21	1.00	.80	9.07	8.34	8.46	17.5	3.61	3.26	3.01	3.0
E. Frank Coe's Prize Brand Grain and Grass Fertilizer .....	.....	.....	.....	10.36	9.90	10.19	10.5	10.5	2.26	2.06	1.33	2.0
E. Frank Coe's Red Brand Excelsior Guano	3.43	3.06	3.14	3.40	8.56	9.03	9.63	9.0	6.31	7.24	5.1	6.0
Perfection Fertilizer .....	.....	.....	.71	.40	.....	.....	8.07	6.0	.....	.....	3.43	2.0
Sweet Corn Manure .....	.....	.....	2.52	2.50	.....	.....	9.16	9.0	.....	.....	2.79	2.0
New Market Fertilizer .....	.....	.....	.97	.40	.....	.....	9.14	6.0	.....	.....	3.78	2.0
Lister's Animal Bone and Potash No. 2 .....	.....	.....	.....	.....	.....	9.73	11.18	10.0	.....	2.53	2.49	2.0
Lister's High Grade Special for Spring Crops	1.88	1.59	1.81	1.65	8.46	8.74	9.12	8.0	10.02	10.83	10.40	10.0
Lister's Potato Manure .....	.....	.....	3.30	3.30	.....	.....	8.40	5.0	.....	.....	7.03	7.0

* Average of two analyses.

† Guarantee changed in 1901.

COMPARISON OF GUARANTEES AND STATION SAMPLES FOR THREE YEARS—Concluded.

Name of Fertilizer.	NITROGEN.			AVAILABLE PHOSPHORIC ACID.			POTASH.		
	Found.			Found.			Found.		
	Guaranteed in 1901.			Guaranteed in 1902.			Guaranteed in 1902.		
	1900.	1901.	1902.	1900.	1901.	1902.	1900.	1901.	1902.
Lister's Seeding Down Fertilizer.....	%.81	1.10	1.11	%.83	1.83	1.83	%.05	1.92	1.69
Lister's Special Corn and Potato Fertilizer.....	*1.77	1.65	1.97	1.65	8.50	8.52	*2.38	3.33	3.15
Lister's Success Fertilizer.....	1.44	1.26	1.36	1.24	9.89	9.62	8.10	2.39	2.24
Swift's Lowell Animal Brand.....	2.64	2.86	2.63	2.47	9.64	8.18	4.13	3.98	4.43
Swift's Lowell Bone Fertilizer.....	1.75	1.98	1.99	1.65	8.07	7.29	8.0	3.35	3.17
Swift's Lowell Dissolved Bone and Potash.....	1.88	1.87	1.70	1.63	9.41	9.68	2.39	2.20	2.47
Swift's Lowell Ground Bone.....	2.04	1.72	2.84	2.47	.....	15.18	.....	.....	.....
Swift's Lowell Potato Manure.....	1.84	1.95	1.94	1.65	6.99	7.61	4.01	4.56	4.26
Swift's Lowell Potato Phosphate.....	2.54	2.81	2.67	2.47	8.27	7.90	7.03	6.48	6.62
Chittenden's Ammoniated Bone Phosphate.....	2.12	1.88	1.72	1.60	9.81	10.17	2.25	2.84	2.68
Chittenden's Complete Fertilizer.....	3.35	3.47	3.42	3.30	7.72	8.13	8.0	6.14	6.79
Chittenden's Market Garden Fertilizer.....	2.57	*2.55	2.52	2.47	6.38	7.78	5.68	5.81	5.79
New England Corn Phosphate.....	1.70	1.91	2.25	1.64	8.79	8.10	3.31	3.61	3.16
New England Potato Fertilizer.....	*1.82	1.77	2.24	1.64	*7.10	8.09	*4.24	4.52	3.86
New England Seeding Fertilizer.....	.....	.....	1.41	1.22	.....	7.61	.....	.....	2.07
A. A. Brand Fertilizer.....	.....	4.54	4.67	4.53	.....	8.92	7.0	8.84	8.53
P. and P. Potato Fertilizer.....	1.97	1.75	2.01	1.64	7.94	6.36	5.66	6.50	6.47
Plymouth Rock Brand Fertilizer.....	2.90	2.71	2.56	2.47	9.30	7.99	5.0	5.00	4.46
Special Potato Fertilizer.....	3.49	3.36	3.17	3.29	9.65	8.47	7.47	7.55	7.33
E. J. Philbrick's High Grade Fertilizer.....	1.63	1.87	3.13	2.00	7.62	7.43	6.34	4.90	5.29
Portland Rendering Co.'s Bone Tankage.....	4.84	4.57	5.46	46.00	9.64	9.32	.....	.....	.....

Provincial Chemical Co.'s Special Potato Phosphate	3.21	3.31	2.56†	†3.00†	9.67	8.44	10.25	†8.0†	4.76	3.41	3.47	†6.5
Essex A 1 Superphosphate.....	.....	1.14	1.09	1.00	.....	6.33	5.04	7.0	.....	2.02	2.54	2.0
Essex Complete Manure for Potatoes, Roots and Vegetables.....	3.96	4.20	3.60	3.70	8.15	8.81	6.87	7.0	8.69	9.15	8.72	8.5
Essex Corn Fertilizer.....	2.13	2.08	2.40	2.00	8.77	8.33	7.10	8.5	3.41	3.05	3.55	3.0
Essex Market Garden and Potato Manure.....	2.03	2.39	2.46	2.00	8.96	8.10	8.06	†8.0	6.27	6.09	5.44	5.0
Essex XXX Fish and Potash.....	2.76	2.47	2.27	2.10	9.56	8.13	7.29	9.0	2.82	2.76	2.56	2.25
Aroostook Potato Manure.....	..	1.36	1.57	1.50	.....	7.31	6.25	7.0	.....	4.01	5.37	3.0
Clark's Mixture .....	.....	.....	7.28	7.50	.....	.....	6.75	.....	.....	.....	8.63	8.0
Dirigo Fertilizer	1.58	1.19	1.28	†1.50	6.12	7.76	7.72	†5.6	4.23	2.73	4.64	†1.75
Sagadahoc Special Potato Fertilizer	*1.44	2.14	2.06	†2.50	*9.32	5.87	6.51	†6.0	9.69	10.93	11.06	7.5
Sagadahoc Superphosphate.....	*1.86	2.09	2.24	†2.00	8.78	8.37	8.33	†7.0	*4.41	3.86	4.63	†3.0
Yankee Fertilizer.....	1.02	1.15	1.58	†1.40	5.20	5.28	4.61	†6.0	4.90	.....	4.34	2.0
Watson's Improved High Grade Potato Manure.....	2.72	3.17	3.03	†3.00	5.84	6.36	5.83	6.0	4.97	6.02	5.31	5.0

* Average of two analyses.

† Guarantee changed in 1901.

COMPARISON OF GUARANTEES AND STATION
SAMPLES FOR THREE YEARS.

It is important for the purchaser of fertilizers to know how the goods have compared with the guarantee, not merely for one year but for several years. Formerly we have printed a table comparing the analysis of the manufacturers' and Station samples for the year with the guarantee. In the table on pages 170 to 175 there is given a comparison of the analyses of the samples collected by the Station for the years 1900, 1901 and 1902 with the guarantee of the manufacturers. When the guarantee has been changed in 1900 from that of the previous years the fact is indicated by a †, and where more than one analysis of the same brand was made in 1900, this is indicated by a *.

One of the claims which fertilizer manufacturers are making for the superiority of their goods over "home mixed fertilizers" is that the former are "manufactured." This should mean, if it means anything, that the goods are more evenly mixed and therefore more uniform. In some instances in which two or more samples of the same brand have been taken and analyzed, they have been found to differ from each other quite materially. The samples were taken with a great deal of care by experienced men from a large number of packages. It would not seem difficult to make "home mixed fertilizers" which should run as uniform as some of the brands here reported upon.

In studying the table of comparison of guarantees of the Station samples for three years, it will be found that many goods run quite uniform year after year. This is particularly true as regards phosphoric acid and is readily understood when it is remembered that the "superphosphate" is the starting point and that the materials furnishing the nitrogen and potash are added to this. The potash and nitrogen are the more expensive substances in fertilizers and greater variations in composition are found in these constituents.

THE LAW REGULATING THE SALE OF CONCENTRATED FEEDING STUFFS, AND THE PROTECTION OF THE CONSUMER.

The law regulating the sale of concentrated commercial feeding stuffs has three essential requirements. 1, The proper branding of the goods, including the guarantee of protein and fat, by the manufacturer or dealer. 2, The analyses by the Station of at least one sample each year of this class of foods sold in the State and 3, the payment to the Station by the manufacturer or dealer of a tonnage tax of 10 cents for each ton sold or offered for sale. Points 1 and 2 are for the protection of the consumer, while 3 is to provide the Station with funds necessary to comply with 2 and to see that the manufacturer or dealer conforms with 1.

The red tax tag, which bears the Director's signature, shows that the tax has been paid but is *not a guarantee of the quality of the goods*. The quality of the goods is guaranteed by the manufacturer, importer or dealer, *and not by the Station*. The samples collected and analyzed by the Station show whether the goods are up to guarantee or not.

While it is important that the tax be paid in order that there may be funds for the inspection, the protection of the consumer does not depend upon this but upon 1 and 2. The consumer before he buys can see that the goods are properly branded. After buying he can, if he chooses, send samples to the Experiment Station, where they will be analyzed free of charge and the results promptly reported.

It will be some months before the Station bulletin giving the analyses of feeds offered in the winter of 1902-1903 will be published. In the meantime dealers and consumers are urged to send samples of feeding stuffs sold in Maine to the Station for free analysis.

